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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,330	10/16/2001	Graham K. Philp JR.	7047	1668

7590

08/24/2004

SHLESINGER, ARKWRIGHT & GARVEY LLP  
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EXAMINER
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POE, MICHAEL I

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/977,330	<b>Applicant(s)</b> PHILP, GRAHAM K.	
	<b>Examiner</b> Michael I Poe	<b>Art Unit</b> 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 22-31 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-11 and 22-31 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Amendments*

1. Applicant's amendment filed on April 23, 2004 has been entered. Based upon the entry of this amendment, existing claims 1-3 have been amended, existing claims 12-21 have been canceled, and new claims 22-31 have been added. Claims 1-11 and 22-31 are currently pending.

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP 0790039 A1 (Palazzolo #1) in view of U.S. Patent No. 5,711,668 (Huestis) for essentially the reasons provided in the previous Office action mailed on October 23, 2003.

#### **Claims 1-3 and 5-10**

The discussion of Palazzolo #1 and Huestis as applied to claims 1-3 and 5-10 in the previous Office action and in the "Response to Arguments" section below applies herein.

The amendments to claims 1-3 in the response filed on April 23, 2004 correspond to the assumptions made by the examiner in the previous Office action and therefore do not change the scope of claims 1-3 and 5-10. As such, claims 1-3 and 5-10 are rejected herein for the reasons set forth in the previous Office action and additionally for the reasons set forth in the "Response to Arguments" section below.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP 0790039 A1 (Palazzolo #1) in view of U.S. Patent No. 5,711,668 (Huestis) and U.S. Patent No. 4,094,067 (Hazar) for essentially the reasons provided in the previous Office action mailed on October 23, 2003.

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**Claim 4**

The discussion of Palazzolo #1 and Huestis as applied to claims 1 and 4 in the previous Office action and in the "Response to Arguments" section below applies herein.

The amendments to claim 1 in the response filed on April 23, 2004 correspond to the assumptions made by the examiner in the previous Office action and therefore do not change the scope of claim 4. As such, claim 4 is rejected herein for the reasons set forth in the previous Office action and additionally for the reasons set forth in the "Response to Arguments" section below.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP 0790039 A1 (Palazzolo #1) in view of U.S. Patent No. 5,711,668 (Huestis) and U.S. Patent No. 4,521,193 (Cialone) for essentially the reasons provided in the previous Office action mailed on October 23, 2003.

**Claim 11**

The discussion of Palazzolo #1 and Huestis as applied to claims 1, 10 and 11 in the previous Office action and in the "Response to Arguments" section below applies herein.

The amendments to claim 1 in the response filed on April 23, 2004 correspond to the assumptions made by the examiner in the previous Office action and therefore do not change the scope of claim 11. As such, claim 11 is rejected herein for the reasons set forth in the previous Office action and additionally for the reasons set forth in the "Response to Arguments" section below.

6. Claims 22-24 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP 0790039 A1 (Palazzolo #1) in view of U.S. Patent No. 5,711,668 (Huestis).

**Claims 22-24, 26, 27 and 30**

Palazzolo #1 teaches a method for the production of a duplicate of a denture original including placing the original denture 18 (an existing dental prosthetic) in a bottom mold 1, pouring a material for use in dental molds (a first molding material) into the bottom mold 1 (bottom half, including a side wall, a bottom and an open top face for mating with the top half) until reaching the level of the bottom of the teeth part 20 of the original denture 18 and thereby embedding the gum portion 19 (a first portion of the existing

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denture) in the mold material, fastening a top countermold 2 (top half including a further side wall, a partially open bottom face for mating with the open top face of the bottom half, and a partially open top) onto the bottom mold 1, pouring (adding) a second material for use in dental molds (a second molding material) into the assembled mold through a central opening 8 (though the partially open top of the top half) in the base of the top countermold 2 to completely embed (covering) the tooth part 20 (a further portion of the existing denture) of the original denture 18, placing the assembled mold into a press of the type used in odontotechny to obtain perfect adherence between the original denture 18 and the mold materials with any excess mold materials being forced out through the central openings 7 and 8 in the assembled mold, allowing the mold materials to harden and/or polymerize in the assembled mold (allowing the first and second material to harden) to form a plaster imprint 23 of the gum portion 19 and a polymer imprint 24 of the dental arch 20 (using the hardened first and second materials to form a negative of the existing dental prosthetic), extracting the original denture 18 from the assembled mold and returning the original denture 18 to the user (removing the dental prosthetic from the first and second material), and forming a new denture in the mold formed between imprint 23 and imprint 24 (using the negative of the existing dental prosthetic to make a positive of a new dental prosthetic) (Abstract; column 5, line 33 – column 6, line 45). Palazzolo #1 further teaches that the perimeter walls 5, 6 are slightly conical in shape (e.g., narrowing from the bottom towards the edge of the walls) (a tapered side wall; a further tapered side wall) to facilitate extraction of the material in the mold when pushed upward through opening 7, 8 in the base at the end of the process (column 5, lines 27-32).

With regard to claim 22, Palazzolo #1 does not specifically teach that the gum portion 19 is placed in the bottom mold 1 after the bottom mold 1 has been partially filled with the mold material. However, Huestis teaches a method of initiating the construction of a new denture from a worn denture including placing a worn denture in an impressionable material 12 located in a flask 14 comprising an upper shell 15 and a lower shell 16 (partially filling the bottom half of the mold with a first molding material; placing a first portion of the existing denture in the first molding material disposed in the bottom half), closing the flask 14, allowing the impressionable material 12 to set and solidify fully in the flask 14, separating the upper shell 15 from the lower shell 16, and removing the patient's worn denture for return

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to the patient (Abstract; column 3, line 50 – column 4, line 4). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to place the first molding material in the bottom mold 1 prior to inserting the original denture 18 into the bottom mold 1 in the process of Palazzolo #1 as taught by Huestis to assure that the first mold material was completely filled into the spaces surrounding the gum portion 19 of the original denture 18 to thereby prevent voids in the formed molding impression.

With regard to claim 22, Palazzolo #1 does not specifically teach that the bottom of the bottom mold 1 is completely closed. However, as illustrated in Figure 5, Huestis further teaches that the lower shell 16 has a completely closed bottom. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to use a bottom mold 1 having a completely closed bottom in the process of Palazzolo #1 as taught by Huestis to remove the limitation of the bottom mold 1 needing to be placed on a flat surface as the first molding material is introduced into the bottom mold 1 to thereby make the process of Palazzolo #1 more flexible.

With regard to claim 24, Palazzolo #1 does not specifically teach that the material poured into the bottom mold is alginate. However, Huestis further teaches that the impressionable material 12 (the first material) is an irreversible hydrocolloid and most preferably an alginate. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to use alginate as the first molding material instead of plaster in the process of Palazzolo #1 as taught by Huestis to provide a first molding material that was cleaner to employ, that generates significantly less dust, and that is cheap.

With regard to claims 26 and 27, Palazzolo #1 in view of Huestis teaches embedding a first portion of the denture (i.e., tooth part 20) in a first molding material followed by covering a second portion of the denture (i.e., gum portion 19) with a second molding material. However, this orientation of the denture is opposite of the orientation claimed in claims 5 and 6. Since the orientation of Palazzolo #1 in view of Huestis would produce the same inner mold impressions as the claimed orientation, and therefore the same product would be produced using those inner mold impressions, the examiner stipulates that the orientation of the denture in the process of Palazzolo #1 in view of Huestis would be an obvious

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variation of the claimed orientation and that the orientation of the denture is not patentably significant in the instant case. As such, the examiner stipulates the applicant's invention in this regard is not patentably distinct from the process of Palazzolo #1 in view of Huestis in this regard.

**Claims 28 and 29**

The discussion of Palazzolo #1 and Huestis as applied to claim 22 above applies herein.

Palazzolo #1 further teaches that the top countermold 2 is fastened onto the bottom mold 1 by bolts 14 that pass through bores 12 in the top countermold 2 and that screw into a thread in a bore 11 in the bottom mold 1 (a locking device is provided for attaching the top half of the mold to the bottom half; a locking device detachably attaches the top half to the bottom half) (column 5, lines 6-22).

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP 0790039 A1 (Palazzolo #1) in view of U.S. Patent No. 5,711,668 (Huestis) and U.S. Patent No. 4,094,067 (Hazar).

**Claim 25**

The discussion of Palazzolo #1 and Huestis as applied to claim 22 above applies herein.

Palazzolo #1 in view of Huestis does not specifically teach that the second molding material may be dental stone. However, Hazar teaches a method for producing artificial dentures including casting an impression model 100 around the lower areas of a fitted denture module, placing the denture module with the impression model 100 in a flask 102, pouring plaster 104 (a first molding material) in the flask 102 around the impression model 100, allowing the plaster 104 to set, applying a release agent to the hardened plaster 104, pouring plaster or dental stone 108 (a second molding material; the second material includes a dental stone) into the flask 102 over the denture (covering a portion of the first material and a further portion of the existing denture with the second material), and allowing the stone 108 to harden to form a mold for an artificial denture (column 4, line 56 – column 5, line 15). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to use dental stone as the second molding material in the process of Palazzolo #1 in view of Huestis as taught by Hazar to provide a second material that was stronger than plaster to thereby produce a stronger impression mold.

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8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP 0790039 A1 (Palazzolo #1) in view of U.S. Patent No. 5,711,668 (Huestis) and U.S. Patent No. 4,521,193 (Cialone).

**Claim 31**

The discussion of Palazzolo #1 and Huestis as applied to claim 30 above applies herein.

Palazzolo #1 in view of Huestis does not specifically teach that corrections to the existing dental prosthetic are made prior to the making of the negative. However, Cialone teaches a method for constructing a temporary denture from an original denture wherein a missing or damaged part of an original denture is replaced before an impression is made or wherein an appropriate correction in the impression is made before molding the temporary denture from the original denture (making corrections to the existing dental prosthetic prior to making the negative) (column 4, lines 31-42). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to make any necessary corrections to the original denture 18 prior to forming the impressions in the process of Palazzolo #1 in view of Huestis as taught by Cialone to provide a denture that more accurately fits the patient's mouth to thereby reduce post molding adjustments.

***Response to Arguments***

9. Applicant's arguments filed April 23, 2004 have been fully considered but they are not persuasive except as noted below.

The applicant's arguments with regard to the rejections under 35 U.S.C. 112, 2<sup>nd</sup> paragraph have been found persuasive by the examiner; therefore, all rejections under 35 U.S.C. 112, 2<sup>nd</sup> paragraph have been withdrawn herein.

The applicant argues that Palazzolo #1 teaches directly away from the applicant's claimed invention because the base 3 of the bottom mold is clearly shown and described as having preferably, but not necessarily, a central opening 7 for purposes of pushing out the mold material. Although the examiner acknowledges that Palazzolo #1 does teach that an open bottom is preferred in column 5, lines



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1-5, the examiner stipulates that Palazzolo #1 does not specifically teach away from using a closed bottom as argued by the applicant. Specifically, as set forth in *In re Susi* [169 USPQ 423 (CCPA 1971)], disclosed examples and preferred embodiments (i.e., an open bottom) do not constitute a teaching away from a broader disclosure or non-preferred embodiments (i.e., a closed bottom). For this reason, the applicant's arguments in this regard are considered unpersuasive by the examiner.

### **Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Publication No. 2004/0043093 A1 (Price et al.) and U.S. Patent No. 6,730,246 B2 (Price et al.) have been cited on interest to show the state of the art at the time the invention was made.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael I Poe whose telephone number is (571) 272-1207. The examiner can normally be reached on Monday through Friday.

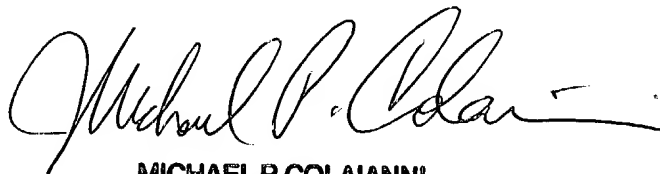
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Poe/mip



**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**